

CLAIMS

1. A projection system, comprising:
a projection device configured to project visible video images onto a screen;
a secondary signal transmitter configured to project invisible light signals onto said screen; and
wherein said invisible light signals are encoded to represent secondary information associated with said video.
2. The system of claim 1, wherein said secondary information is audio information.
3. The system of claim 1, further comprising one or more receivers configured to receive said invisible light signals projected onto said screen and to decode said invisible light signals.
4. The system of claim 1, wherein said receivers comprise personal headphone sets configured to receive and decode said invisible light signals into audibly-perceptible sounds.
5. The system of claim 1, wherein said receivers are loudspeakers configured to receive and decode said invisible light signals into audibly-perceptible sounds.

6. The system of claim 1, wherein said screen is a reflective surface.
7. The system of claim 1, wherein said screen is a transflective surface.
8. The system of claim 1, wherein said secondary signal transmitter is configured to project a plurality of channels of invisible light signals onto said screen.
9. The system of claim 8, further comprising one or more receivers configured to receive said invisible light signals projected onto said screen and to decode said invisible light signals into audibly-perceptible sounds; and wherein said receivers are equipped to be selectively configured by a user to decode one of said plurality of channels of invisible light signals into audibly-perceptible sounds at a given time.
10. The system of claim 8, wherein said plurality of channels of invisible light signals represents alternative soundtracks associated with said video images projected onto said screen.
11. The system of claim 8, wherein said plurality of channels of invisible light signals represents different channels of a single soundtrack having a surround sound feature.

12. The system of claim 8, wherein said plurality of channels of invisible light signals comprise polarized light signals.

13. The system of claim 8, wherein said plurality of channels of invisible light signals comprise modulated light signals.

14. The system of claim 1, wherein said invisible light signal comprises infrared light.

15. The system of claim 1, wherein said invisible light signal comprises ultraviolet light.

16. The system of claim 1, wherein said secondary signal transmitter comprises a light emitting diode.

17. The system of claim 1, wherein said secondary signal transmitter is positioned outside of said video projection device.

18. The system of claim 1, wherein said video projection device includes a lens through which said video images are projected, and wherein said secondary signal transmitter is positioned inside of said video projection device and is configured to emit said invisible light signal through said lens.

19. The system of claim 1, wherein said video projection device includes a digital micromirror device having a plurality of micromirrors that each selectively reflects light from a primary light source through a lens; and wherein said secondary signal transmitter is positioned inside of said video projection device and is configured to emit said invisible light signal such that it is reflected by a plurality of said micromirrors concurrently with light from said primary light source through said lens.

20. The system of claim 1, wherein said video projection device includes a digital micromirror device having a plurality of micromirrors that each selectively reflects light from a primary light source through a lens; and wherein said secondary signal transmitter is positioned inside of said video projection device and is configured to emit said invisible light signal such that it is reflected by each of said micromirrors through said lens at times when light from said primary light source is not reflected through said lens by said respective micromirror.

21. A method for presenting audio information to a video-viewing audience, comprising:

- projecting video images onto a screen; and
- projecting invisible light signals encoded to represent secondary information associated with said video images onto said screen concurrently with said video images.

22. The method of claim 21, wherein said secondary information is audio information.

23. The method of claim 21, wherein said video images and said invisible light signals are projected concurrently through a common lens.

24. The method of claim 21, wherein said invisible light signals comprise a plurality of separate channels of invisible light signals.

25. The method of claim 24, wherein said separate channels of invisible light signals are modulated.

26. The method of claim 24, wherein said separate channels of invisible light signals represent different soundtracks associated with a single video.

27. The method of claim 24, wherein said separate channels of invisible light signals represent different channels of surround sound audio information associated with a single soundtrack.

28. The method of claim 21, further comprising the step of selectively polarizing said invisible light signals.

29. The method of claim 21, further comprising receiving said reflected invisible light signals and decoding said reflected invisible light signals into audibly-perceptible sounds.

30. A method for watching and listening to an audio-visual presentation, comprising:

viewing visually-perceptible light images projected from a video projection device, which are projected onto a screen; and

listening to an audibly-perceptible soundtrack decoded from invisible light signals projected onto said screen.

31. The method of claim 30, wherein different persons viewing the same set of visually-perceptible light images listen to different soundtracks associated with said set of projected light images.

32. The method of claim 30, wherein said listening step includes listening to a plurality of channels of audio information delivered from a plurality of speakers.

33. An audio visual projection system, comprising:

a means for projecting video images onto a screen; and

a means for projecting invisible light signals onto said screen, said invisible light signals being encoded to represent secondary information associated with said video images.

34. The system of claim 33, further including at least one receiver configured to receive said invisible light signals projected onto said screen and to decode said invisible light signals into audibly-perceptible sounds.

35. A projection system, comprising:

a projection device configured to project visible video images onto a first screen;

a secondary signal transmitter configured to project invisible light signals encoded to represent secondary information associated with said video images onto a second screen; and

wherein said visible video images and said invisible light signals are transmitted through a common lens concurrently.